

REMARKS

Claims 1-17 are pending and rejected in this application.

Responsive to the objection to the drawings, the Applicants respectfully traverse the objection and submit that the drawings are in condition for acceptance.

Applicants respectfully refer the Examiner to Fig. 3 and the text on page 5, line 22, which states, "electrical connector 16 is positioned at an end 36 of tubing 14, and hermetically seals tubing 14 at end 36." As can be seen in Fig. 3 and by the explanatory text, electrical component 16 does hermetically seal the end of tubing 14 and is the sole electrical component on the end of tubing 14, therefore Applicants can claim that electrical component 16 does solely hermetically seal tubing 14. Accordingly, Applicants submit that the drawings do properly illustrate the claimed elements and are in condition for acceptance, which is hereby respectfully requested.

Responsive to the rejection of claims 1, 10 and 14 under 35 U.S.C. §112, second paragraph, Applicants respectfully traverse the rejection and submit that claims 1, 10 and 14 are in condition for allowance.

Applicants respectfully refer the Examiner to Fig. 3 and the text on page 5, line 22, which states, "electrical connector 16 is positioned at an end 36 of tubing 14, and hermetically seals tubing 14 at end 36." As can be seen in Fig. 3 as interpreted by the explanatory text, electrical component 16 does hermetically seal the end of tubing 14, there being no sealant added to electrical component 16 and electrical component 16 is the sole electrical component on the end of tubing 14, therefore Applicants can claim that electrical component 16 does solely hermetically seal tubing 14. Accordingly, Applicants submit that claims 1, 10 and 14 do particularly point out and distinctly claim the subject matter of the present invention and that claims 1, 10 and 14 are in condition for allowance, which is hereby respectfully requested.

Responsive to the rejection of claims 1-4, 7-10 and 13 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,283,393 (Guginsky) in view of U.S. Patent No. 4,271,458 (George Jr.), Applicants respectfully traverse the rejection, and submit that claims 1-4, 7-10 and 13 are in condition for allowance.

Guginsky discloses an armored flexible electrical conduit with fittings (Figs. 1 and 2) including a flexible hermetically tight metal conduit 11, a conduit connector female compression fitting 12 and a male tubular coupling 13. Fitting 12 and coupling 13 are coupled to conduit 11 in a hermetically sealed relationship. Fittings 12 and/or coupling 13 are also used to provide a conduit connection to an electrical junction box (column 2, lines 47-59). Female compression fitting 12 is provided with gland nut 27 which compresses a gland or gasket encircling a conduit inserted into female compression fitting 12 thereby clamping conduit 11 and effecting a hermetically tight coupling (column 3, lines 33-38). Insulation covered multiple conductor cable 29 traverses the length of conduit 11, fittings 12 and couplings 13 (column 3, lines 61-65).

George, Jr. discloses a decorative lighting tube 10 including a pair of relatively stiff insulated wires 12 and 14. Coupled at each end of insulated wires 12 and 14 are dual pin connector terminals 16 and 18. One or more strings of low voltage unbased lamps 20 are connected between wires 12 and 14. The ends of tube 30 are filled with a slug of suitable plastic sealant 32 and end plugs 24 and 28 are inserted to push the adhesive slug ahead of them forming a fluid-type (sic) seal while compressing the lengths of wires 12 and 14 (column 2, lines 18-61).

In contrast claim 1, as previously amended, recites in part, "an electrical component ... solely hermetically sealing said tubing end." (Emphasis added) Applicants submit that such an invention is neither taught, disclosed nor suggested by Guginsky, George Jr. or any of the other cited references, alone or in combination, and includes distinct advantages thereover.

Guginsky discloses the use of fittings 12 and couplings 13 to hermetically seal conduit 11 to another conduit 11 or an electrical junction box through which conductor cable 29 traverses. George, Jr. discloses a decorative lighting tube 10 including a pair of relatively stiff insulated wires 12 and 14 coupled to dual pin connector terminals 16 and 18 in end plugs 24 and 28. The ends of tube 30 are filled with a slug of suitable plastic sealant 32 and end plugs 24 and 28 are inserted to push the adhesive slug ahead of them, thereby forming a fluid-type (sic) seal. However, neither Guginsky nor George Jr. teach or suggest an electrical component solely hermetically sealing a tubing end, as recited in part in claim 1. Contrary to the declaration by the Examiner that Guginsky can be combined with a "solely hermetically sealant" of George Jr. to result in the present invention; George Jr. teaches the need for end plugs to be "inserted to push the adhesive slug ahead of them forming a fluid-type seal." (column 2, lines 58-60) As such, George Jr. does not teach an electrical component solely hermetically sealing a tubing end since the adhesive slug depends on the insertion of a plug to form the seal.

The hermetic sealing of an end of a tubing assembly, as in the Applicants' invention, is distinct from hermetically sealing a conduit to another conduit or a junction box, such as taught by Guginsky. This has been recognized by the Examiner on page 4 of the Office Action where it is indicated that Guginsky fails to disclose an electrical component solely hermetically sealing a tubing end. However, Applicants' invention solely hermetically seals the end of the tubing, thereby not allowing the routing of conductors after the seal is in place. Therein lies an advantage of Applicants' invention, that being a hermetic seal to an end of a tubing assembly, which provides environmental protection when unattached to any other assembly. In contrast, the conduit of Guginsky would not be hermetically sealed if unattached to another structure such as a conduit or an electrical junction box. George Jr. teaches the need for an end plug to be inserted in the tubing end to push the adhesive slug ahead of it, thereby forming a seal. As such, George Jr.

does not teach an electrical component solely hermetically sealing a tubing end since the adhesive slug depends on the insertion of a plug to form the seal. Accordingly, Applicants submit that claim 1, and claims 2-4 and 7-9 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

Additionally claim 7, recites in part, "said tubing including a non-smooth inner surface, said electrical component having an outer periphery which is in continuous intimate physical contact with said inner surface." (Emphasis added) Applicants submit that such an invention is neither taught, disclosed nor suggested by Guginsky, George Jr. or any of the other cited references, alone or in combination, and includes distinct advantages thereover.

Guginsky discloses the use of fittings 12 and couplings 13 to hermetically seal conduit 11 to another conduit 11 or an electrical junction box through which conductor cable 29 traverses. George Jr. discloses a tube with a smooth interior wall in the figure. However, Guginsky and/or George Jr. do not teach or suggest a tubing including a non-smooth inner surface, the electrical component having an outer periphery which is in continuous intimate physical contact with the inner surface, as recited in part by claim 7. The Examiner refers to Fig. 2 of Guginsky stating that the electrical connector has an outer periphery which is in continuous intimate physical contact with the inner surface of the tubing. However, Fig. 2 does not indicate that the connector is in continuous intimate physical contact with conduit 11. Rather what is shown (referring additionally to Fig. 3) is a strap 26 compressed onto cylindrical wall 18, but not onto annular flange 19, therefore the connector is not in continuous intimate physical contact with the outer or the inner surface of the tubing. Further, peripheral strap 26 tightly encircles and radially compresses the outer end border of conduit 11 to strap 26 abutting a peripheral head formed on fitting 12 (column 3, lines 29-32). Hence in Guginsky it is the inner periphery of the connector which comes into contact with the outer surface of the conduit, which is contrary to what is

claimed in claim 7, wherein a tubing including a non-smooth inner surface, the electrical component having an outer periphery which is in continuous intimate physical contact with the inner surface. George Jr. has an adhesive slug that coacts with a plug to seal an end of a smooth walled tube. It is unlikely that the seal of the plug by the adhesive slug would be effective if the tube was other than smooth on the interior. Accordingly, Applicants submit that claim 7, and claim 8 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

In further contrast, claim 10, as previously amended, recites in part, "an electrical component ... solely hermetically sealing said tubing end." (Emphasis added) Applicants submit that such an invention is neither taught, disclosed nor suggested by Guginsky, George Jr. or any of the other cited references, alone or in combination, and includes distinct advantages thereover.

Guginsky discloses the use of fittings 12 and couplings 13 to hermetically seal conduit 11 to another conduit 11 or an electrical junction box through which conductor cable 29 traverses. George, Jr. discloses a decorative lighting tube 10 including a pair of relatively stiff insulated wires 12 and 14 coupled to dual pin connector terminals 16 and 18 in end plugs 24 and 28. The ends of tube 30 are filled with a slug of suitable plastic sealant 32 and end plugs 24 and 28 are inserted to push the adhesive slug ahead of them, thereby forming a fluid-type (sic) seal. However, neither Guginsky nor George Jr. teach or suggest an electrical component solely hermetically sealing a tubing end, as recited in part in claim 10. Contrary to the declaration by the Examiner that Guginsky can be combined with a "solely hermetically sealant" of George Jr. to result in the present invention; George Jr. teaches the need for end plugs to be "inserted to push the adhesive slug ahead of them forming a fluid-type seal." (column 2, lines 58-60) As such, George Jr. does not teach an electrical component solely hermetically sealing a tubing end since the adhesive slug depends on the insertion of a plug to form the seal.

The hermetic sealing of an end of a tubing assembly, as in the Applicants' invention, is distinct from hermetically sealing a conduit to another conduit or a junction box, such as taught by Guginsky. This has been recognized by the Examiner on page 4 of the Office Action where it is indicated that Guginsky fails to disclose an electrical component solely hermetically sealing a tubing end. However, Applicants' invention solely hermetically seals the end of the tubing, thereby not allowing the routing of conductors after the seal is in place. Therein lies an advantage of Applicants' invention, that being a hermetic seal to an end of a tubing assembly, which provides environmental protection when unattached to any other assembly. In contrast, the conduit of Guginsky would not be hermetically sealed if unattached to another structure such as a conduit or an electrical junction box. George Jr. teaches the need for an end plug to be inserted in the tubing end to push the adhesive slug ahead of it, thereby forming a seal. As such, George Jr. does not teach an electrical component solely hermetically sealing a tubing end since the adhesive slug depends on the insertion of a plug to form the seal. Accordingly, Applicants submit that claim 10, and claim 13 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

Claims 5 and 6 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Guginsky in view of George Jr. and in further view of U.S. Patent No. 4,701,574 (Shimirak et al.). However, claims 5 and 6 depend from claim 1, and claim 1 has been placed in condition for allowance for the reasons given above. Accordingly, Applicants submit that claims 5 and 6 are in condition for allowance, which is hereby respectfully requested.

Claims 11 and 12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Guginsky in view of George Jr. and in further view of Shimirak et al. However, claims 11 and 12 depend from claim 10, and claim 10 has been placed in condition for allowance for the reasons given above. Accordingly, Applicants submit that claims 11 and 12 are in condition for

allowance, which is hereby respectfully requested.

Responsive to the rejection of claims 14-17 under 35 U.S.C. § 103(a) as being unpatentable over Guginsky in view of George Jr., Applicants respectfully traverse the rejection, and submit that claims 14-17 are in condition for allowance.

Guginsky and George Jr. are described above.

In contrast claim 14, as amended, recites in part:

a plug solely hermetically sealing said tubing end, said at least one electrical conductor extending through and sealed with said plug.

(Emphasis added) Applicants submit that such an invention is neither taught, disclosed nor suggested by Guginsky, George Jr. or any of the other cited references, alone or in combination, and includes distinct advantages thereover.

Guginsky discloses the use of fittings 12 and 13 to hermetically seal conduit 11 to another conduit 11 or an electrical junction box through which conductor cable 29 traverses. George, Jr. discloses a decorative lighting tube 10 including a pair of relatively stiff insulated wires 12 and 14 coupled to dual pin connector terminals 16 and 18 in end plugs 24 and 28. The ends of tube 30 are filled with a slug of suitable plastic sealant 32 and end plugs 24 and 28 are inserted to push the adhesive slug ahead of them, thereby forming a fluid-type (sic) seal. However, Guginsky and George Jr. alone or in combination with any other cited reference fail to disclose, teach or suggest a plug solely hermetically sealing the tubing end, with at least one electrical conductor extending therethrough and sealed with the plug, as recited in part by claim 14. Contrary to the declaration by the Examiner that Guginsky can be combined with a "solely hermetically sealant" of George Jr. to result in the present invention; George Jr. teaches the need for end plugs to be "inserted to push the adhesive slug ahead of them forming a fluid-type seal." (column 2, lines 58-60) As such, George Jr. does not teach a plug solely hermetically sealing a tubing end since the adhesive slug depends on the insertion of a plug to form the seal.

The hermetic sealing of an end of a tubing assembly, as in the Applicants' invention, is distinct from hermetically sealing a conduit to another conduit or a junction box, such as taught by Guginsky. This has been recognized by the Examiner on page 4 of the Office Action where it is indicated that Guginsky fails to disclose an electrical component solely hermetically sealing a tubing end. However, Applicants' invention solely hermetically seals the end of the tubing, thereby not allowing the routing of conductors after the seal is in place. Therein lies an advantage of Applicants' invention, that being a hermetic seal to an end of a tubing assembly, which provides environmental protection when unattached to any other assembly. In contrast, the conduit of Guginsky would not be hermetically sealed if unattached to another structure such as a conduit or an electrical junction box. George Jr. teaches the need for an end plug to be inserted in the tubing end to push the adhesive slug ahead of it, thereby forming a seal. As such, George Jr. does not teach a plug solely hermetically sealing a tubing end since the adhesive slug depends on the insertion of a plug to form the seal. Accordingly, Applicants submit that claim 14, and claims 15-17 depending therefrom, are in condition for allowance, which is hereby respectfully requested.

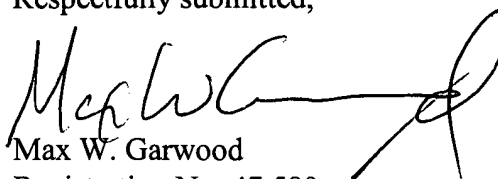
For the foregoing reasons, Applicants submit that no combination of the cited references teaches, discloses or suggests the subject matter of the amended claims. The pending claims are therefore in condition for allowance, and Applicants respectfully request the withdrawal of all rejections and allowance of the claims.

In the event Applicants have overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicants hereby conditionally petition therefor and authorizes that any charges be made to Deposit Account No. 20-0095, TAYLOR & AUST, P.C.



Should any question concerning any of the foregoing arise, the Examiner is invited to telephone the undersigned at (260) 897-3400.

Respectfully submitted,

  
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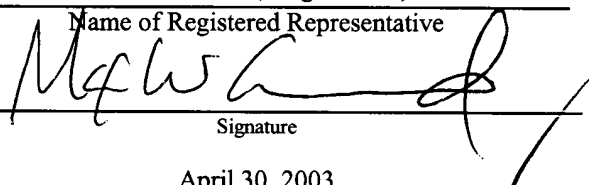
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April 30, 2003

Date